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Sent: Wed 7/12/2017 2:03:41 PM
Subject: NCEA Weekly Report for July 12, 2017
NCEA 30 Day Outlook 7-12-2017.docx

National Center for Environmental Assessment
Weekly Report for July 12, 2017

Notables listed below and 30-day Outlook attached.

Hot Items

Chloroprene Emissions from the Denka Performance Elastomers (DPE). On July 12, John Vandenberg will participate in a meeting with the State of Louisiana Department of Environmental Quality, St John the Baptist council and school board members, Louisiana Department of Health Services, EPA Region 6, and others to discuss air monitoring and other activities related to chloroprene emissions from the Denka Performance Elastomers (DPE) facility located in LaPlace, LA. A Request for Correction (RFC) under the Information Quality Act was submitted by DPE. The RFC asserts that the chloroprene IRIS assessment, completed in 2010, should be withdrawn and updated. EPA is now evaluating this request. The DPE facility emissions of chloroprene, a chemical used to make neoprene used in soft plastic materials such as rubber seals and wetsuits, were estimated by OAR's National Air Toxics Assessment to produce high health risks. Ambient monitoring data collected over the last year has demonstrated high concentrations in the nearby community including at an elementary school, high school, hospital and residences. The purpose of this meeting is to inform community leaders of the State and Federal activities related to DPE.

NAAQS Decision. A proposed decision on the Primary National Ambient Air Quality Standards (NAAQS) for Oxides of Nitrogen is anticipated for this Friday, July 14, in response to a court order. John Vandenberg, Jen Richmond-Bryant, Jen Nichols, James Brown, and Tom Luben participated in a call with the Office of Information and Regulatory Affairs (OIRA) of the Office of Management and Budget (OMB), OAQPS, OP and OGC to discuss OMB comments on the proposal. OAQPS is revising the proposal in response to OMB comments, including clarification of some of the science evidence. The requested edits to the description of the science evidence are minor and not anticipated to be controversial. A follow-up call with OMB is scheduled for July 12, 2017.

WITHIN EPA

Chromium and Region 10. At the request of Region 10, Michael Stewart will be reviewing modeled chromium concentrations around a glass facility in Seattle, WA. Region 10 noted the potential for relatively high chromium concentrations to occur based on emission comparisons to similar facilities that also use chromium in their glass coloring process. This is an important issue given the potential public health impact and recent media attention given to air toxics being released from these types of facilities. Michael will be discussing this effort with staff from Region 10 and OECA in a meeting scheduled for July 18, 2017.

Provisional Advisory Levels (PALs) for Hazardous Chemicals. Serving as a member of the NHRSC Provisional Advisory Level (PAL) Steering Committee, Annie Jarabek provided a technical review of proposed Standard Operating Procedures (SOPs) for the Development of Provisional Advisory Levels (PALs) for Hazardous Chemicals. Provisional Advisory Level (PAL) values are health-based exposure recommendation levels for temporary inhalation and oral exposures, and are developed for specified exposure durations thought to represent those relevant to emergency response and emergency management scenarios. The SOP document is intended to help formalize the methods used for their derivation to further enhance transparency, consistency, credibility and communication regarding their use. Comments were aimed at reinforcing these areas and included the need for more rigorous definition and clarity on context and underlying concepts to ensure the PAL values reach their full potential in various applications.

Other Items of Interest

Asbestos. On July 14, Annie Jarabek will attend as a member of the Science Advisory Board (SAB) to the Fraunhofer Institute of Toxicology and Environmental Medicine (ITEM) to review data from the 28- and 90-day sacrifice time points in an inhalation study performed at the CiTox Laboratory in Hungary. The SAB previously inspected all aspects of the inhalation study of asbestos fibers and brake dust underway at the facility, including: exposure generation and characterization, animal husbandry, health and safety, various biochemical assays and necropsy. The on-going SAB interaction affords opportunity to impart state of the science methods as well as appreciation for how these data will be used in risk assessment.

Systematic Review (SR) inventory. On July 17, Jennifer Nichols will provide an overview of the Systematic Review (SR) Inventory at the next SR Community of Practice meeting. The

purpose of this presentation will be to introduce a preliminary plan/template for the inventory, solicit input from the SR Community regarding specific information they would like about the available SR tools, and request additional materials (e.g., SOPs, guidance documents, memos) that would be useful to share with the Community through the inventory.

BMDExpress – quantitative support for analyzing genomic data. The Benchmark Dose Software team, Jeff Gift, Allen Davis, and Todd Blessinger provided support for BMDExpress – helping with the development of new model features, including the estimation of benchmark dose upper confidence limits (BMDUs) for the BMDS Express genomic dose-response modeling software developed by EPA and currently receiving extensive use an interest from NIH. BMDExpress will be a focus of an upcoming October 23-25, 2017 Expert Panel Meeting at NIEHS, "Peer Review of Draft NTP Approach to Genomic Dose-Response Modeling."

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PUBLICATION AND PRODUCT UPDATES:

Method to Assess the Contribution of Components to the Toxicity of Complex Mixtures: Assessment of Puberty Acquisition in Rats Exposed to Disinfection Byproducts. The article, "Method to Assess the Contribution of Components to the Toxicity of Complex Mixtures: Assessment of Puberty Acquisition in Rats Exposed to Disinfection Byproducts" by Parvez et al. develops a method based on regression analysis to discern the contribution of component chemicals to the toxicity of complex mixtures. In the article, the method is applied to environmentally realistic mixtures of drinking water disinfection byproducts (DBPs) and developmental effects in rats. This method is applicable to mixtures of other types of chemicals and other health effects.

Doi: 10.1016/j.jes.2017.05.042.

http://www.sciencedirect.com/science/article/pii/S1001074217303935

Improving Predictive Models of In-Stream Phosphorus Concentration Based on Nationally-Available Spatial Data Coverages. The article "Improving Predictive Models of In-Stream Phosphorus Concentration Based on Nationally-Available Spatial Data Coverages" by Murray Scown, a former ORISE postdoctoral participant is to be published in the August issue of the Journal of the American Water Resources Association. Mike McManus is a co-author along with Chris Nietch, an ecologist at NRMRL. The article discussed how spatial data are playing an increasingly important role in watershed science and management. The paper investigates the effectiveness of nationally-available spatial data for modeling total phosphorus concentrations (TP) in the East Fork of the Little Miami River, Ohio, a 1290 km2 watershed. A spatial stream network model that included local watershed-specific covariates, which characterized septic systems and point source TP loads, outperformed models that had only more generic national

covariates.

Scown, Murray W., Michael G. McManus, John H. Carson Jr., and Christopher T. Nietch. Improving Predictive Models of In-Stream Phosphorus Concentration Based on Nationally-Available Spatial Data Coverages. Journal of the American Water Resources Association (JAWRA) 00(0):1–17.

Doi: 10.1111/1752-1688.12543

https://doi.org/10.1111/1752-1688.12543

Benchmark Dose Software (BMDS) version 2.7. Jeff Gift, Allen Davis, and Todd Blessinger plan to release Benchmark Dose Software (BMDS) version 2.7 by August 18, 2017. This release contains various bug fixes and enhancements, which continue BMDS's evolution as a mature, widely-used product. Additionally, users will see new features including BMDS models reporting the benchmark dose upper confidence limit (BMDU) in addition to the lower confidence limit (BMDL).

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